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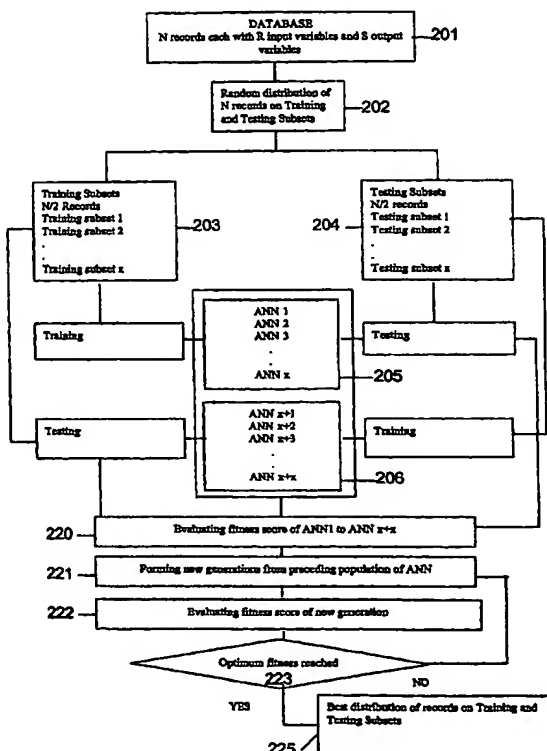
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR OPTIMIZATION OF A DATABASE FOR THE TRAINING AND TESTING OF PREDICTION ALGORITHMS



(57) Abstract: A system and method are provided for the training and testing of prediction algorithms. According to an exemplary embodiment of the invention the method generates optimum training, testing and/or validation data sets from a common general database by applying a genetic algorithm to populations of testing and training subsets used in connection with a given prediction algorithm. In exemplary embodiments the prediction algorithm operated upon is an artificial neural network. As well, in preferred exemplary embodiments, the most predictive independent variables of the records of the common database are automatically selected in a pre-processing phase. Such preprocessing phase applies a genetic algorithm to populations of prediction algorithms which vary as to number and content of input variables, where the prediction algorithms representing the selections of input variables which have the best testing performances and the minimum input variables are promoted for the processing of the new generations according to a defined selection algorithm.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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A. CLASSIFICATION OF SUBJECT MATTER  
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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 G06N G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, IBM-TDB, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X Y A	US 2002/059154 A1 (RODVOLD DAVID M) 16 May 2002 (2002-05-16) paragraph '0007! - paragraph '0053!	1,4, 23-25 30-34 2,3, 5-22, 26-29
Y	US 2002/184569 A1 (O'NEILL MICHAEL) 5 December 2002 (2002-12-05) paragraph '0020! - paragraph '0068! claims 1,12	30-34
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*Z\* document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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